

**REMARKS**

Reconsideration and withdrawal of the rejections of this application and consideration and entry of this paper are respectfully requested in view of the herein remarks, which place the application in condition for allowance. The Examiner is thanked for indicating that claims 1, 2, 4, 5, 18-20 and 22 are allowable.

Claims 1-14 and 18-20 and 22-24 are pending. Claims 4, 6, 7-14, 18, 22-24 are amended and claim 21 is cancelled without prejudice, without admission, without surrender of subject matter, and without any intention of creating any estoppel as to equivalents. Support for the amended claims can be found throughout the specification.

No new matter is added.

It is submitted that the claims as previously pending and as now pending are patentably distinct from the references cited by the Examiner, and that these claims are in full compliance with the requirements of 35 U.S.C. §112. The amendments and claim additions herein are not made for the purpose of patentability within the meaning of 35 U.S.C. §§ 101, 102, 103 or 112; but rather the amendments and additions are made simply for clarification and to round out the scope of protection to which Applicant is entitled.

Claims 3, 6-8, 9-14, 23 and 24 are rejected under 35 U.S.C. §112 second paragraph as being allegedly indefinite. The rejection is traversed.

The amended recitations to claims 3, 6-8, 9-14 and 23-24 made without prejudice, without admission, without surrender of subject matter, and without any intention of creating any estoppel as to equivalents, have rendered the instant rejections moot.

With regard to the Examiner's allegation that claim 21 is a substantial duplicate of claim 4, claim 21 is cancelled without prejudice, without admission, without surrender of subject matter, and without any intention of creating any estoppel as to equivalents, thereby obviating the rejection.

Reconsideration and withdrawal of the §112, second paragraph, rejections are respectfully requested.

If any issue remains as an impediment to allowance, prior to issuance of any paper other than a Notice of Allowance, an interview is respectfully requested; and, the Examiner is further respectfully requested to contact the undersigned to arrange a mutually convenient time and manner for the interview.

In view of the remarks and amendments herewith, the application is believed to be in condition for allowance. Favorable reconsideration of the application and prompt issuance of a Notice of Allowance are earnestly solicited. The undersigned looks forward to hearing favorably from the Examiner at an early date.

Respectfully submitted,

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By:



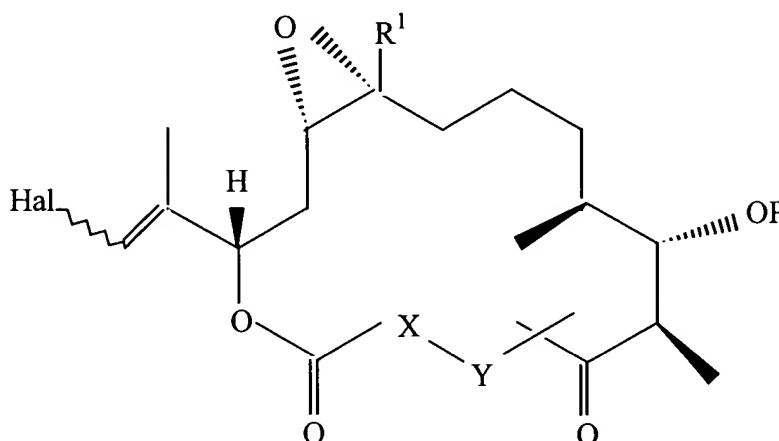
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**VERSION TO SHOW CHANGES MADE**

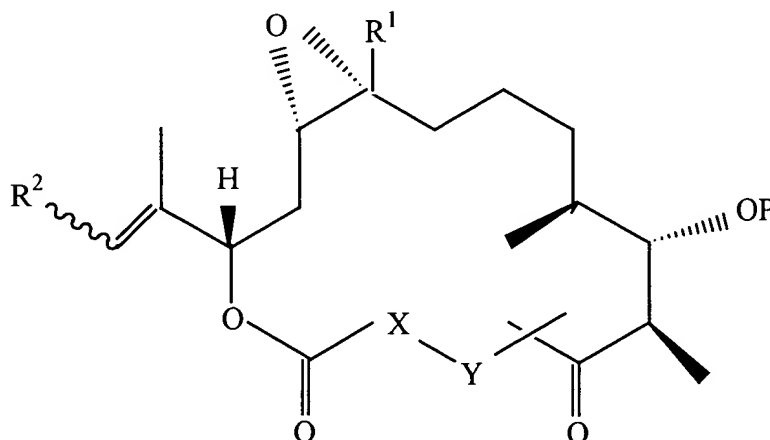
**IN THE CLAIMS:**

3. (Amended) Epothilone derivative of formula (4)



wherein the residues  $R^1$ , X-Y and P are defined as in claim 1, and Hal is a halogen [especially Br or I].

4. (Amended) Epothilone derivative of the formula (5)



wherein the residue  $R^1$  is a hydrogen atom or a  $C_{1-8}$ -alkyl group, [X-Y] and P [are defined in claim 1] is a protective group and X-Y is a group of formula  $-CH_2CH-OP$  or  $CH=CH$ , and  $R^2$  is a monocyclic aromatic which can be substituted by a halogen atoms and/or  $OR^4$ - and/or  $NR^5R^6$ -

and/or alkyl, alkenyl and/or alkynyl groups in ortho- and/or meta- and/or para-position, or a monocyclic 5- or 6-membered hetero aromatic, which can be provided with one or several O- and/or N- and/or S-atoms in the ring and/or which can be provided with OR<sup>4</sup>- and/or NR<sup>5</sup>R<sup>6</sup>- and/or alkyl, alkenyl and/or alkynyl groups as substituents, wherein the residues R<sup>4</sup>, R<sup>5</sup> and R<sup>6</sup> independently are defined as R<sup>1</sup> in claim 1, but are independent of R<sup>1</sup>, wherein

(i) XY is excluded as group of formula –CH=CH- if R<sup>1</sup> is a hydrogen atom or a C<sub>1-4</sub>-alkyl group and R<sup>2</sup> is a monocyclic hetero aromatic having a N atom [and] and/or a S atom atom in its ring and a C<sub>1</sub>-alkyl substituent and

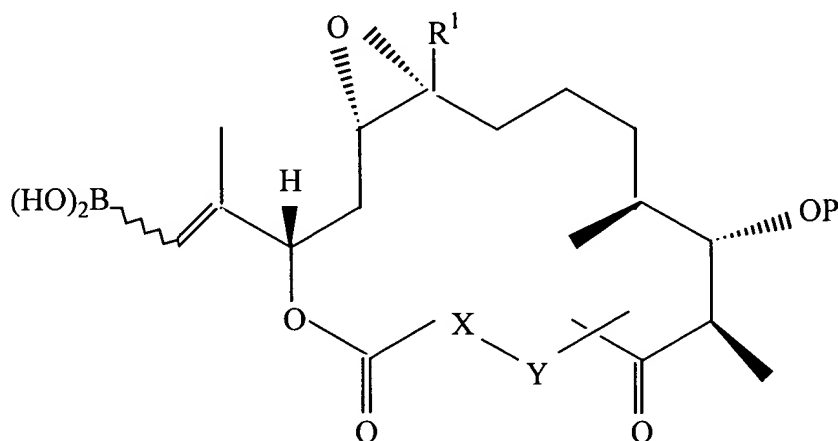
(ii) XY is excluded as group of formula –CH<sub>2</sub>-CH-OP if R<sup>1</sup> is a hydrogen atom or a C<sub>1-4</sub>-alkyl group and R<sup>2</sup> is a monocyclic hetero aromatic having a N atom [and] and/or a S atom in its ring and a C<sub>1</sub>-alkyl substituent.

6. (Amended) Epothilone derivative [according to claim] as in claims 1, 2, 3, 4, 5 or 22 wherein R<sup>1</sup>, R<sup>4</sup>, R<sup>5</sup> and R<sup>6</sup> are a hydrogen atom or a C<sub>1-6</sub>-alkyl group[, especially a C<sub>1-6</sub>-alkyl group].

7. (Amended) Epothilone derivative [according to claim] as in claims 4, 5, 6 or 22 wherein the substituents of the monocyclic aromatic and/or hetero aromatic are C<sub>1-6</sub>-alkyl, C<sub>2-6</sub>-alkenyl and C<sub>2-6</sub>-alkynyl groups respectively[, especially C<sub>1-4</sub>-alkyl, C<sub>2-4</sub>-alkenyl and C<sub>2-4</sub>-akynyl groups, respectively and [the halogen atoms] fluoro, chloro, bromo or iodo atoms.

8. (Amended) Epothilone derivative [according to claim] as in claims 4, 5, 6, 7 or 22 wherein the aromatic and hetero aromatic, respectively, is provided with 1, 2 or 3 substituents and the hetero aromatic is provided with 1, 2 or more [and especially 1, 2, 3, or 4] hetero atoms.

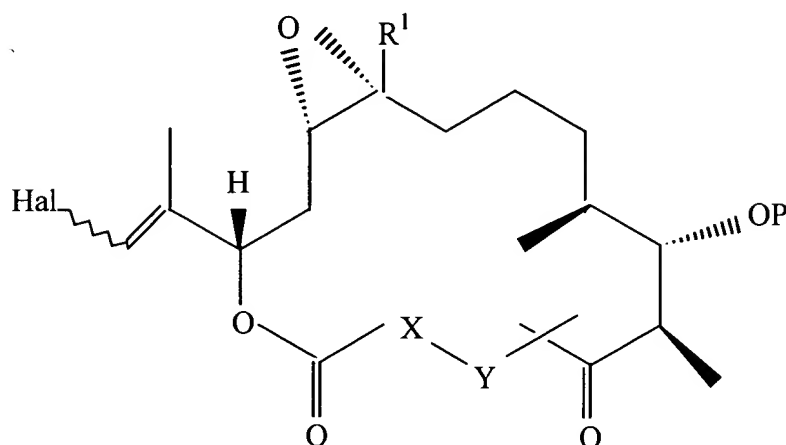
9. (Amended) Process for the preparation of a compound of formula (3),



wherein a compound of formula (2) according to claim 1 is reacted with the compound of formula  $\text{HC} [\text{B} (\text{OR})_2]_3$  optionally in the presence of a base, wherein the [residues are defined as in claim 1] residue  $\text{R}^1$  is a hydrogen atom or a  $\text{C}_{1-8}$ -alkyl group, X-Y is a group of formula  $-\text{CH}_2\text{CH-OP}$  or  $-\text{CH}=\text{CH}-$ , and P is a protective group, wherein X-Y is excluded as group of formula  $-\text{CH}_2\text{CH-OP}$  if  $\text{R}^1$  means a hydrogen atom or a  $\text{C}_{1-4}$ -alkyl group and R is defined as  $\text{R}^1$ , but is independent of  $\text{R}^1$ .

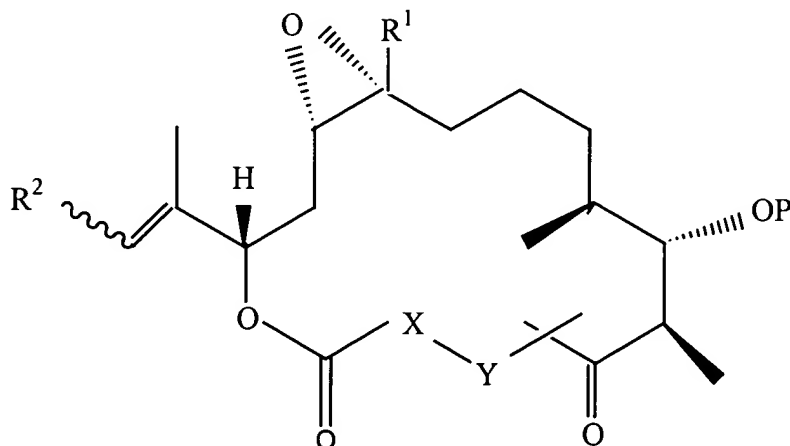
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10. (Amended) Process for the preparation of a compound of formula (4),



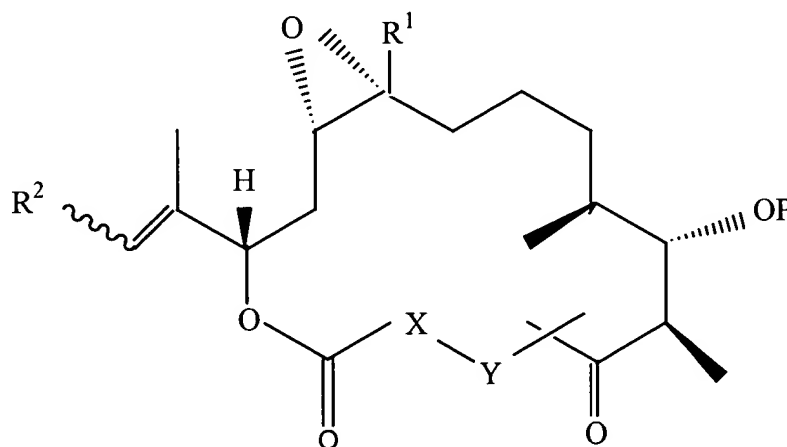
wherein a compound of formula (3) according to claim 2 is reacted with N-iodo- or N-bromo succinimide and that the [residues are defined as in claim 1] residue R<sup>1</sup> is a hydrogen atom or a C<sub>1-8</sub>-alkyl group, X-Y is a group of formula -CH<sub>2</sub>CH-OP or -CH=CH-, and P is a protective group, wherein X-Y is excluded as group of formula -CH<sub>2</sub>CH-OP if R<sup>1</sup> means a hydrogen atom or a C<sub>1-4</sub>-alkyl group.

11. (Amended) Process for the preparation of a compound of formula (5),



wherein a compound of formula (3) according to claim 2 is reacted by a Suzuki coupling with a compound of formula  $R^2-Z$ , wherein  $R^2$  is [defined as in claim 1] is a monocyclic aromatic which can be substituted by halogen atoms and/or  $OR^4$ - and/or  $NR^5R^6$ - and/or alkyl, alkenyl and/or alkynyl groups in ortho- and/or meta- and/or para-position, or a monocyclic 5- or 6-membered hetero aromatic, which can be provided with one or several O- and/or N- and/or S-atoms in the ring and/or which can be provided with  $OR^4$ - and/or  $NR^5R^6$ - and/or alkyl, alkenyl and/or alkynyl groups as substituents and Z can be a halogen atom or a group of formula  $-OSO_2CF_3$ ,  $-CH=CHI$ ,  $-CH=CHOSO_2CF_3$ .

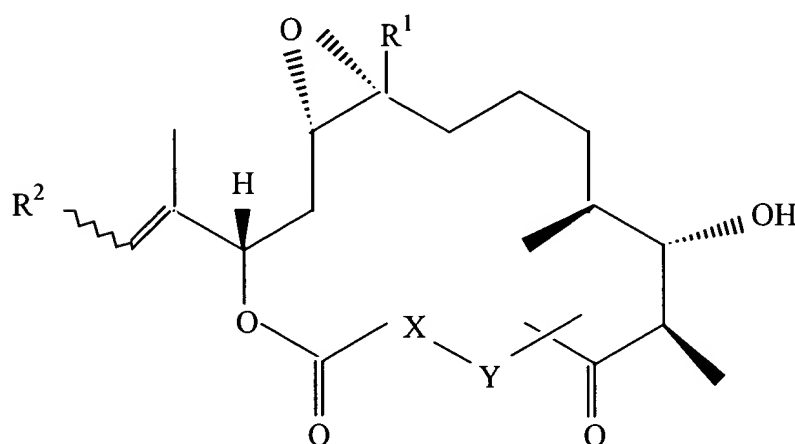
12. (Amended) Process for the preparation of a compound of formula (5),



wherein a compound of formula (4) according to claim 3 is reacted by a silent coupling (stille Kupplung) with  $R_2-SNR^3$ , wherein  $R^2$  [is defined as in claim 1] is a monocyclic aromatic which can be substituted by halogen atoms and/or  $OR^4$ - and/or  $NR^5R^6$ - and/or alkyl, alkenyl and/or alkynyl groups in ortho- and/or meta- and/or para-position, or a monocyclic 5- or 6-membered hetero aromatic, which can be provided with one or several O- and/or N- and/or S-atoms in the ring and/or which can be provided with  $OR^4$ - and/or  $NR^5R^6$ - and/or alkyl, alkenyl and/or alkynyl

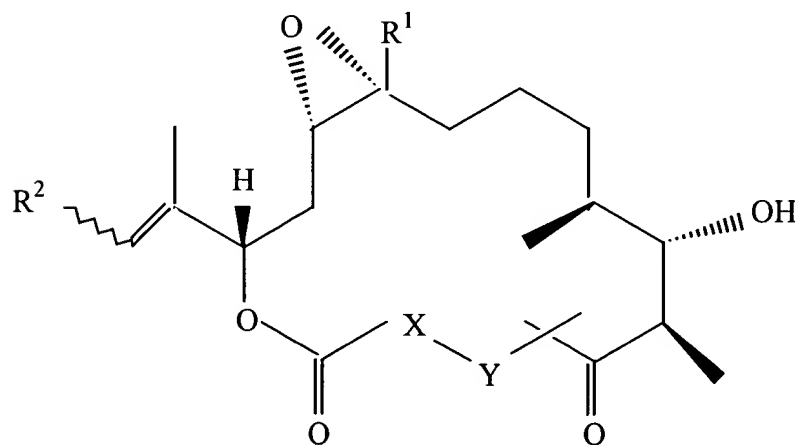
groups as substituents and  $R^3$  is a  $C_{1-6}$ -alkyl group[, especially a  $C_{1-4}$ -alkyl group, preferably a methyl, ethyl, propyl or butyl group].

13. (Amended) Process for the preparation of a compound of formula (6),



wherein the protective group is removed from a compound of formula (5) according to claim 4.

14. (Amended) Process for the preparation of a compound of formula (6),

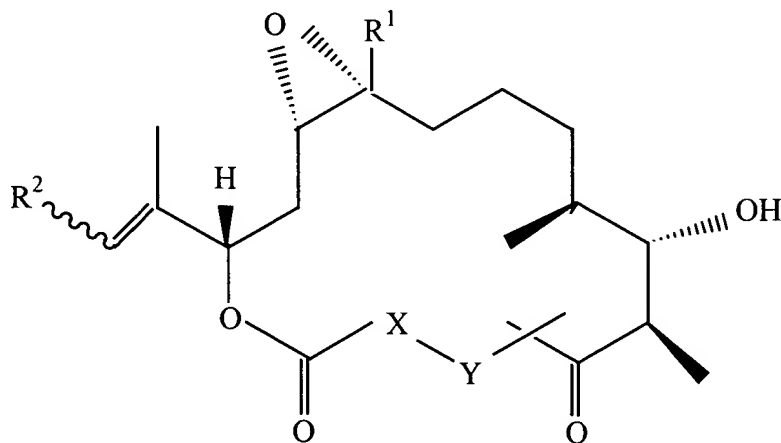


wherein it comprises the process steps as disclosed in [claim] claims 9, 10, 11, 12 or 13.



18. (New) A pharmaceutical composition comprising at least one of the compounds described in [claim] claims 1, 2, 3, 4, 5, 6, 7, 8 or 22 and optionally carriers, diluents and/or auxiliary agents.

22. (New) Epothilone derivative of formula (6)



wherein the residues are defined as in claim 4 and, if X-Y means a group of formula  $-\text{CH}_2\text{CH}-$  OP, the protective group P has been removed, wherein

(i) XY is excluded as group of formula  $-\text{CH}=\text{CH}-$  if  $\text{R}^1$  is a hydrogen atom or a  $\text{C}_{1-4}$ -alkyl group and  $\text{R}^2$  is a monocyclic hetero aromatic having a N atom [and] and/or a S atom [and/or an O atom] in its ring and a  $\text{C}_1$ -alkyl substituent and

(ii) XY is excluded as group of formula  $-\text{CH}_2\text{CH}-\text{OP}$  if  $\text{R}^1$  is a hydrogen atom or a  $\text{C}_{1-4}$ -alkyl group and  $\text{R}^2$  is a monocyclic hetero aromatic having a N atom [and] and/or a S atom and/or an O atom in its ring and a  $\text{C}_1$ -alkyl substituent.

23. (Amended) Epothilone derivative according to claim [21] 22, wherein the substituents of the monocyclic aromatic and/or hetero aromatic are  $\text{C}_{1-6}$ -alkyl,  $\text{C}_{2-6}$ -alkenyl and  $\text{C}_{2-6}$ -alkinyl groups

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respectively, especially C<sub>1-4</sub>-alkyl, C<sub>2-4</sub>-alkenyl and C<sub>2-4</sub>-alkinyl groups, respectively and the halogen atoms fluoro, chloro, bromo or iodo atoms.

24. (Amended) Epothilone derivative according to claim [21] 22, wherein the aromatic and hetero aromatic, respectively, is provided with 1, 2 or 3 substituents and the hetero aromatic is provided with 1, 2 or more [and especially 1, 2, 3, or 4] hetero atoms.